



CDF Operations

Steve Hahn

December 13, 2004

All Experimenters' Meeting



Store Summary (12/06–12/13)

Store	Start Date	Duration (hours)	Initial Instantaneous Luminosity ($10^{30} \text{ cm}^{-2}\text{s}^{-1}$)	Delivered Integrated Luminosity (nb^{-1})	Live Integrated Luminosity (nb^{-1})
3821	12/07	3.3	10.3	102.6	72.2 70.3%
3824	12/08	9.9	48.0	824.4	576.6 69.9%
3829	12/09	16.3	51.1	1742.6	1232.8 70.7%
3834	12/11	28.1	56.7	2572.2	1838.4 71.5%
3841	12/13	0.3	52.7	52.0	34.5 66.4%
Total 3821–3841		57.9		5293.8	3754.5 71.0%
FY2004 (3033–3841)	11/22/03	3462		318,026	250,747 78.8%

Note: no runs with silicon yet



CDF Operations

- Lower efficiency (~70%) due to startup tests:
 - New hardware, software, and trigger tables all in queue
 - ➔ “Parallel logger” CSL tests for CSL hardware, CSL software, consumer software, and trigger tables
 - ➔ Additional trigger bits for consumer software and trigger tables
 - ➔ Next software release (5.3.3 to 6.0.0int3) for TDC firmware, consumer software, trigger tables, L3 software, and offline production software.
 - Many runs adds downtime due to 5–10 minute run initialization
- Why no silicon?
 - No silicon till run ends cleanly and calibrations done
 - Things that make silicon (and CDF) nervous:
 - ➔ Large losses
 - ➔ Losing TeV electron lens (resulting in dirty aborts due to beam in abort gaps)
 - ➔ RF problems and separator sparks



CDF Operations

- Run 3821, Tuesday, Dec. 7, 3:25 PM:
 - Started with default physics table
 - Then minimum bias data till store lost
 - Work done on L3 and pulsar after shot
- Run 3824, Wednesday, Dec. 8, 2:22 PM:
 - Three separator sparks result in lum loss and trips at CDF. Last causes quench.
 - Zero bias data for CPR timing studies
 - First attempt at using 3-track board for XTRP
 - CLC front-end processor code test results in luminosity zeroed several times in middle of store
 - L3/EVB reboot causes 1/2 hour downtime
- Run 3829, Thursday, Dec. 9, 9:22 PM:
 - Access in morning to fix several problems: central SMX crates, central CES HV, a couple of PMT problems, COT TDCs
 - RF1 fan shaft replaced
 - Continue 3-track board tests with beam; trigger table tests with tighter cuts
 - L2 decision board swapped out due to errors



CDF Operations

☛ Run 3834, Saturday, Dec. 11, 2:56 AM:

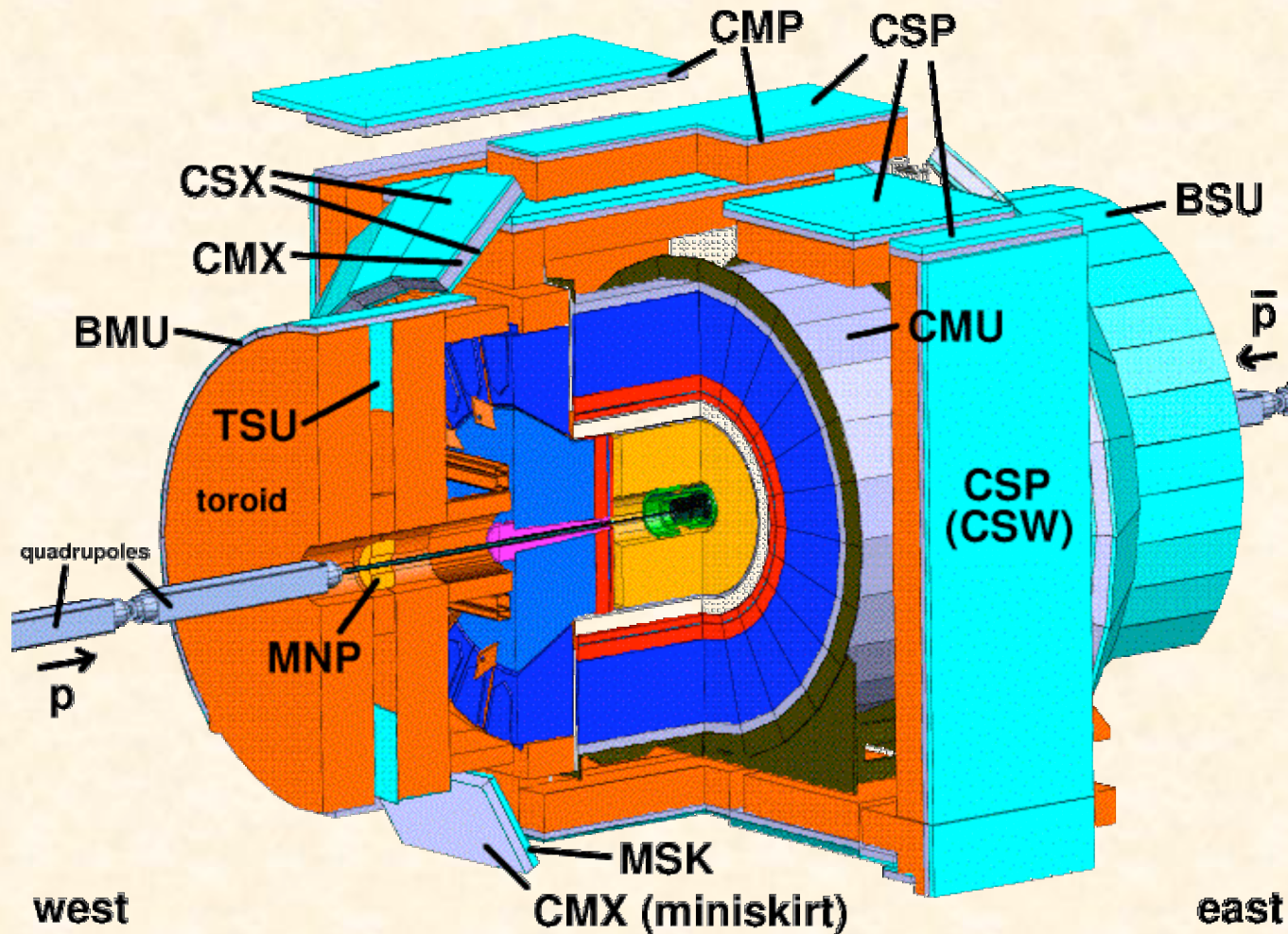
- SVX calibrations necessary before running done Thursday
- Rough startup
 - ➔ Loss blowup after scraping holds off running for one hour for rescrape
 - ➔ New monitor process reports COT data missing, only realize it is lying after seeing hits in event display after another hour
- Smooth running afterward; Sunday owl shift 99.8% efficient

☛ Run 3841, Monday, Dec. 13, 11:53 AM:

- Hoping to try silicon after two hours of smooth operation but...



CDF Run IIB Detector





CDF Run IIB Detector (inner)

